measurements in each 6 hour segment. Mean slopes for each segment are presented.

	Morning	Day	Evening	Night
Normals	201	138	151	120
AMI−	199	180	203	190
AMI+	160	145	145	122
	*NS, *NS	NS*, *	NS*, **	NS***, ***

*p < 0.05; **p < 0.005; ***p < 0.0005

We conclude that myocardial infarction has an important influence on dynamic QT behaviour. Slopes during the day, the evening an the night are steeper compared to slopes in normal individuals.

Beta-blocker therapy results in a significant decrease of QT-slope after myocardial infarction and tends to normalize the rate dependent changes of the QT interval.

3:15

801-6 A New Noninvasive Test to Predict Inducible Ventricular Tachycardia In Patients with Unexplained Syncope: QT Dispersion

Leigh A. Hutchinson, Fidela Moreno, Frederick A. Ehlert, Jonathan S. Steinberg *St. Luke's-Roosevelt Hospital Center and Columbia University, New York, NY; LDS Hospital, Salt Lake City, UT*

Regional disparities in ventricular repolarization are known to promote reentrant ventricular arrhythmias; recent work suggests that this may be assessed noninvasively using QT/JT dispersion on the surface ECG. However, very little data is available on its clinical use. We studied pts with unexplained syncope to determine if inducible VT could be predicted by QT dispersion (QTd, defined as QTmax-QTmin), QT standard deviation (QTstd), and equivalent JT intervals. Values were also corrected using Bazett's formula. We enrolled 38 pts (22 M, age = 59 ± 18 yrs, 29% prior MI) who underwent programmed electrical stimulation (PES). Standard ECGs were recorded prior to PES and analyzed by a computerized analyzer/digitizer. *Results:* Of the 38 pts, 9 (24%) had inducible sustained VT and 29 pts did not.

	QTd	QTstd	JTd	JTstd
VT	59 ± 18	18 ± 5	63 ± 21	19 ± 4
No VT	46 ± 14	14 ± 4	51 ± 12	15 ± 5
p value	0.03	0.02	0.08	0.03

Standard QRS, QT and QTc, and corrected dispersion intervals were not significantly different between pts with and without inducible VT.

Conclusion: Confirming the relationship of dispersion of ventricular repolarization and ventricular reentry, several ECG parameters of dispersion were associated with inducible VT in patients with unexplained syncope. QT dispersion is a novel and noninvasive measure of risk of VT.

802 Insights From Epidemiology and Clinical Prachce

Wednesday, March 22, 1995, 2:00 p.m.–3:30 p.m.
Ernest N. Morial Convention Center, Room 90

2:00

802-1 Clinical Value and Cost of Screening Exercise Treadmill Testing in Asymptomatic Individuals

Louise Pilote, Michael S. Lauer, Fredric Pashkow, Thomas H. Marwick, James D. Thomas *Cleveland Clinic Foundation, Cleveland, OH*

Background: Exercise treadmill testing (ETT) is frequently performed to screen for coronary artery disease (CAD) in asymptomatic individuals; however, its clinical value is questionable. *Methods:* To evaluate the clinical value of ETT, we examined a cohort of asymptomatic individuals undergoing ETT at the Cleveland Clinic between September 1990 and December 1993. ETT was abnormal if it exhibited any of the following: a 1 mm ST-T elevation or depression, a drop in blood pressure ≥10 mmHg, chest pain or failure to reach a target heart rate. Any CAD was defined by at least 1 coronary segment with ≥50% stenosis. Severe CAD was defined by the following: 1) left main coronary artery with ≥50% stenosis, 2) 3 vessels with ≥70% stenosis or 3) proximal left anterior descending artery and 2 vessels with ≥70% stenosis. *Results:* During this period, 4335 ETT's were performed in individuals with no cardiac symptoms. The average age was 53, 89% were male and 16% had at least one cardiac risk factor. Fifteen percent exhibited an abnormal ETT. Among those with an abnormal ETT, 14% underwent coronary angiography while among those with a negative ETT, 1% underwent angiography. Coronary angiography identified 56% as having any CAD and 15% as having severe CAD. In this asymptomatic population, 228 ETT's and 7 coronary angiograms were performed in order to identify 1 individual with severe CAD. Using Medicare reimbursement of $70 for ETT and $1500 for angiography, the cost of screening per case of severe CAD identified would be $26,460. Based on previously published data on survival with surgical and medical therapy in patients with severe CAD, we estimate a cost of $120,000 to $180,000 per year of life saved with this screening approach. *Conclusion:* This low yield suggests that screening asymptomatic individuals with ETT may be costly and of little clinical value compared to other screening approaches.

2:15

802-2 Cardiovascular Risk Factors Levels and Changes Following Lifestyle Intervention in Families: The British Family Heart Study

David Wood, Stephen Pyke, Ann-Louise Kinmonth, Simon Thompson, British Family Heart Study Group. *Department of Clinical Epidemiology, National Heart and Lung Institute, London, UK*

2373 families were recruited to a national randomised controlled trial of cardiovascular screening and lifestyle intervention in 26 general practices in 13 towns across Britain. 2054 (87%) comprised both a male and female partner and amongst these 1477 (72%) were represented at screening by both partners. There was a significant association between reported cigarette smoking habits in partners (odds ratio 6.1 95% CI 4.6, 8.0) at baseline. Where both partners were initially smokers, men were 5 times and women were 10 times ($p < 0.05$) more likely to have quit where their partner had also quit. Body mass index (BMI) measurements were correlated ($r = 0.21$, $p < 0.0001$) at baseline and one year changes in BMI in partners were also significantly correlated ($r = 0.20$, $p < 0.0001$). Similar results were found for systolic blood pressure, blood cholesterol and blood glucose cross-sectionally ($r = 0.14$, 0.10, 0.13 respectively, $p < 0.0005$) and longitudinally ($r = 0.14$, 0.24, 0.19 respectively, $p < 0.0001$). Whilst the cross sectional inter-partner relationships are weak the longitudinal results demonstrate the scope for cardiovascular intervention programmes to capitalize on the tendency of partners to change together. Men and women most able to improve their risk factor profile over a one year period tend to have partners who also improve substantially. Therefore, for lifestyle intervention programmes in middle aged men and women, targeting a couple together rather than as individual patients may result in a greater reduction in cardiovascular risk factors through mutual reinforcement of lifestyle changes.

2:30

802-3 Treatment of Ventricular Arrhythmias After the Cardiac Arrhythmia Suppression Trial (CAST): A Survey of US Physicians

Yves Rosenberg, Eleanor Schron, Mario Stylianou, Albert Parker. *National Heart, Lung, and Blood Institute, Bethesda, MD*

To determine how US physicians treat patients with asymptomatic ventricular arrhythmias we conducted in fall 1992, after the publication of all CAST results, a telephone survey of a randomly selected sample of 1072 American generalists (G) and cardiologists (C), as part of a survey designed to study how the results of three major cardiovascular clinical trials have influenced medical practice.

730 physicians reported treating patients with ventricular arrhythmias. The response rate was 63% (G: 65.3%, C: 60.9%). 44.2% of G, but only 22.1% of C would routinely use an antiarrhythmic drug (AAD) or device to treat a patient presenting ventricular premature depolarizations (VPD) who had a myocardial infarction (MI) in the past six months ($p < 0.001$). 68.2% of G and 40% of C would treat the same patient if he presented asymptomatic nonsustained ventricular tachycardia (NSVT), $p < 0.001$. For the former condition, the first choice drug would be a β-blocker (G = 53.5%, C = 74%, $p < 0.002$), but 28.3% of G and 23.5% of C would use a class I AAD (with <1% using a class IC).

36.9% of G and 16.1% of C would treat a patient with coronary heart disease and an ejection fraction <40% presenting asymptomatic VPD, 66.2% of G and 39.6% of C would treat asymptomatic NSVT ($p < 0.001$). For asymptomatic VPD, the first choice drug is a Class I AAD (G = 46.4%, C = 47.2%); 27.4% of G and 44.4% of C would prescribe a β-blocker; 11.9% of G but no C would prescribe a calcium-blocker. For the physicians treating NSVT, the first choice drug is:

	Class I			Class II	Class III	Class IV	Other AAD	Other
	IA	IB	IC					
G (n = 145)	49%	0%	0.7%	17.2%	0%	9.7%	4.8%	11.7%
C (n = 91)	51.7%	12.1%	1.1%	29.7%	2.2%	2.2%	0%	1.1%
Total	50%	8.9%	0.8%	22%	0.8%	6.8%	3%	7.6%